

Concord Sustainable House – Water Systems Summary

Fully Sustainable in Waste and Potable Water

- All sewerage is treated on site and is recycled to use in the house to flush toilets and wash clothes, while outside to water gardens. The system used is based on a standard twin tank aerated waste-water treatment unit from a reputable supplier, with the chlorinator replaced by a passive sand filter, UV disinfection and below ground absorption pit for the excess water. The system continues to deliver excellent recycled water quality:
BOD < 10; Suspended Solids < 10; Faecal Coliform < 5 (normally 0), Virus Count normally 0. Notably no sewerage has left the site since July 2004.
- The house also harvests rainwater from almost all roof areas and this water is used to wash, shower, cook and drink. The main features include EnviroFlo (now called SmartFlo) gutters, LeafCatcha rain heads, first-flush devices via a wet pipe (charged line) technique to three storage tanks totally 25,000 litres. Testing demonstrates that the quality of drinking (potable) water meets the National Health and Research Council Guidelines for drinking water in Australia.
- Water saving showerheads and flow restrictors are used throughout the house to help manage demand.

All of the water systems above cost approximately \$17,000 for supply, installation and includes excavation for the tanks, absorption pit & piping.

- The house is self sufficient in terms of water, now permanently disconnected from town water. This has been possible since Sydney Water changed their policies early in 2007 to allow full disconnection in a relatively simple manner, similar to other utilities such as the gas, phone & electricity. By doing this we are now NOT paying any usage or connection fees to Sydney Water, we are no longer their customer. This saves us about \$500 per year in fixed charges. The costs associated with the disconnection were: \$150 for the plumber & \$142 for the once-off fee to Sydney Water. (See the information from Michael Mobbs on the back of this sheet for further details, or on his web site: www.sustainablehouse.com.au & follow link to “How to Disconnect from Mains Water & Sewer”)



Treatment tanks under rear deck



Passive sand filter



Capped off water supply



Capped off sewerage gully